ELECTRONIC DEVICE WITH A FUNCTION OF SEARCHING IMAGES BASED ON FACIAL FEATURE AND METHOD

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ABSTRACT

An electronic device with a function of searching images based on a facial feature is provided. The electronic device includes a capturing unit, a storage unit, an acquiring module, a searching module, a folder establishing module, a processing unit, and a validating module. The capturing unit captures facial images. The storage unit stores a plurality of images. The acquiring module acquires facial features of the facial image captured by the capturing unit. The searching module searches for images that include the acquired facial feature from the plurality of images stored in the storage unit. The folder establishing module establishes a new folder and stores the searched images to the established new folder.
Acquiring module
Searching module
Folder establishing module
Prompting module
Encrypting module
Validating module
Decrypting module
S601: Start

S602: Acquire a facial feature of the facial image captured by the capturing unit

S603: Search for images that include the acquired facial feature from the number of images stored in the storage unit

S604: Establish a new folder and store the searched images to the established new folder

S605: Whether to encrypt the new folder

- **No**
  - End

- **Yes**
  - Take the acquired facial feature as an encryption key to encrypt the new folder

FIG. 2
ELECTRONIC DEVICE WITH A FUNCTION OF SEARCHING IMAGES BASED ON FACIAL FEATURE AND METHOD

BACKGROUND

[0001] 1. Technical Field

[0002] The present disclosure relates to electronic devices and, particularly, to an electronic device with a function of searching images based on a facial feature and a method for searching images based on a facial feature.

[0003] 2. Description of Related Art

[0004] It is difficult and time-consuming for users to find images which include a predetermined facial feature from a large amount of images. In addition, it is necessary for the user to encrypt the found images to prevent the found images being seen by other people.

[0005] Therefore, what is needed is an electronic device to overcome the described limitations.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] FIG. 1 is a block diagram of the hardware infrastructure of an electronic device with a function of searching images based on a facial feature, in accordance with an exemplary embodiment.

[0007] FIG. 2 is a flowchart of a method for searching images based on a facial feature implemented by the electronic device of FIG. 1, in accordance with an exemplary embodiment.

DETAILED DESCRIPTION

[0008] FIG. 1 shows an electronic device 100 with a function of searching images based on facial features. The electronic device 100 includes a capturing unit 10, a storage unit 20, and a processing unit 30.

[0009] The capturing unit 10 captures facial images. The storage unit 20 stores a number of images. In one embodiment, the capturing unit 10 is a camera.

[0010] The processing unit 30 includes an acquiring module 31, a searching module 32, and a folder establishing module 33.

[0011] The acquiring module 31 acquires a facial feature of a facial image captured by the capturing unit 10. In one embodiment, the facial feature of the facial image may be a facial shape, a facial size, a facial proportion, or a combination thereof. Technology for acquiring the facial feature from the facial image is well known technology, and there is no need to describe it in detail in the present disclosure.

[0012] The searching module 32 searches images that include the acquired facial feature from the number of images stored in the storage unit 20.

[0013] The folder establishing module 33 establishes a new folder which is used to store the searched images by the searching module 32.

[0014] The processing unit 30 further includes a prompting module 34 and an encrypting module 35. The prompting module 34 prompts a user whether to encrypt the new folder. The encrypting module 35 takes the acquired facial feature as an encryption key to encrypt the new folder when the user selects to encrypt the new folder, thereby preventing the searched image from being seen by other people.

[0015] The processing unit 30 further includes a validating module 36 and a decrypting module 37. The validating module 36 prompts the user to input a facial image when the user wants to open the encrypted folder. The acquiring module 31 acquires the facial feature of the facial image in response to an image input operation from the user. The validating module 36 further validates whether the acquired facial feature is consistent with the encryption key for encrypting the folder. The decrypting module 37 decrypts the encrypted folder when the acquired facial feature is consistent with the encryption key for encrypting the folder.

[0016] FIG. 2 is a flowchart of a method for searching images based on a facial feature implemented by the electronic device of FIG. 1, in accordance with an exemplary embodiment.

[0017] In step S601, the acquiring module 31 acquires the facial feature of the facial image captured by the capturing unit 10.

[0018] In step S602, the searching module 32 searches for images that include the acquired facial feature from the number of images stored in the storage unit 20.

[0019] In step S603, the folder establishing module 33 establishes a new folder and stores the searched images to the established new folder.

[0020] In step S604, the prompting module 34 prompts a user whether to encrypt the new folder, if yes, the procedure goes to step S605, if no, the procedure goes end.

[0021] In step S605, the encrypting module 35 takes the acquired facial feature as an encryption key to encrypt the new folder.

[0022] The method further includes steps as follows: the validating module 36 prompts the user to input a facial image when the user wants to open the encrypted folder. The acquiring module 31 acquires the facial feature of the facial image in response to an image input operation from the user. The validating module 36 further validates whether the acquired facial feature is consistent with the encryption key for encrypting the folder, and the decrypting module 37 decrypts the encrypted folder when the acquired facial feature is consistent with the encryption key for encrypting the folder.

[0023] Although the present disclosure has been specifically described on the basis of the embodiments thereof, the disclosure is not to be construed as being limited thereto. Various changes or modifications may be made to the embodiments without departing from the scope and spirit of the disclosure.

What is claimed is:

1. An electronic device with a function of searching images based on a facial feature comprising:
   - a capturing unit configured to capture facial images;
   - a storage unit configured to store a plurality of images;
   - an acquiring module configured to acquire a facial feature of the facial image captured by the capturing unit;
   - a searching module configured to search for images that include the acquired facial feature from the plurality of images stored in the storage unit; and
   - a folder establishing module configured to establish a new folder and store the searched images to the established new folder.

2. The electronic device as described in claim 1, further comprising:
   - a prompting module configured to prompt a user whether to encrypt the new folder; and
   - an encrypting module configured to take the acquired facial feature as an encryption key to encrypt the new folder when the user selects to encrypt the new folder.
3. The electronic device as described in claim 2, further comprising:
   a validating module configured to prompt the user to input
   a facial image when the user wants to open the encrypted
   folder;
   the acquiring module further configured to acquire the
   facial feature of the facial image in response an image
   input operation from the user;
   the validating module further configured to validate
   whether the acquired facial feature is consistent with the
   encryption key for encrypting the folder; and
   a decrypting module configured to decrypt the encrypted
   folder when the acquired facial feature is consistent with
   the encryption key.

4. The electronic device as described in claim 1, wherein
   the facial feature of the facial image is a facial shape, a facial
   size, a facial proportion, or a combination thereof.

5. A method for searching images based on a facial feature
   implemented by an electronic device, wherein the electronic
   device comprises a capturing unit and a storage unit, the
   capturing unit is configured to capture facial images, the
   storage unit is configured to store a plurality of images, the
   method comprising:
   acquiring a facial feature of the facial image captured by
   the capturing unit;
   searching for images that include the acquired facial fea-
   ture from the plurality of images stored in the storage
   unit;
   establishing a new folder; and
   storing the searched images to the established new folder.

6. The method as described in claim 5, further comprising:
   prompting a user whether to encrypt the new folder; and
   taking the acquired facial feature as an encryption key to
   encrypt the new folder when the user selects to encrypt
   the new folder.

7. The method as described in claim 6, further comprising:
   prompting the user to input a facial image when the user
   wants to open the encrypted folder;
   acquiring the facial feature of the facial image in response
   an image input operation from the user;
   validating whether the acquired facial feature is consistent
   with the encryption key for encrypting the folder; and
   decrypting the encrypted folder when the acquired facial
   feature is consistent with the encryption key for encrypt-
   ing the folder.

8. The method as described in claim 5, wherein the facial
   feature of the facial image is a facial shape, a facial size, a
   facial proportion, or a combination thereof.

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